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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
CHING YAO HUANG

Serial No.: 10/086,910

Filed: February 28, 2002

For: WIRELESS PAGING BASED AT LEAST
PARTIALLY ON THE
TECHNOLOGICAL CAPABILITY OF
THE MOBILE DEVICE

Examiner: UN C. CHO

Group Art Unit: 2682

Att'y Docket: 2100.005800

APPEAL BRIEF

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

11.15.05
Date

Kathy Alana
Signature

Sir:

Appellant hereby submits this Appeal Brief to the Board of Patent Appeals and Interferences in response to the final Office Action dated May 24, 2005. A Notice of Appeal was filed on September 21, 2005 and so this Appeal Brief is believed to be timely filed.

A check in the amount of \$500.00 is enclosed for filing this Appeal Brief. However, should this check be omitted the Commissioner is authorized to deduct the fee for filing this Appeal Brief (\$500) from **Williams, Morgan & Amerson's P.C. Deposit Account 50-0786.2100.005800.**

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I. REAL PARTY IN INTEREST

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to Lucent Technologies, Inc., is recorded at Reel 13014, Frame 0039.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

III. STATUS OF THE CLAIMS

Claims 1-29 are pending in the present application. Claims 1-3, 6-7, 10-11, 15, 18-20, 23-25, and 28-29 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Corriveau, et al (U.S. Patent No. 5,918,177) in view of Streter (U.S. Patent No. 6,456,858). Claims 4-5, 13-14, and 21-22 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corriveau in view of Streter and further in view of La Medica, et al (U.S. Patent No. 6,625,451). Claims 8-9, 16-17, and 26-27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corriveau in view of Streter and further in view of Lamb, et al (U.S. Patent No. 6,697,620). Claim 12 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corriveau in view of Streter and further in view of Lamb and De Oliveira (U.S. Patent No. 6,763,004).

IV. STATUS OF AMENDMENTS

There were no amendments after the final rejections.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claims 1 and 18 set forth an apparatus and a method, respectively, for wirelessly paging a mobile device using a network operating according to multiple wireless technologies based at least in part on a technological capability of the mobile device. Claims 1 and 18 also set forth, among other things, determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on the accessed information and generating a paging request for the mobile device that is based at least partially on the technological capability of the mobile device when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network.

As defined in the specification, wireless technologies are the technologies used to support wireless communications between mobile devices and networks. Wireless technologies include personal communications services (PCS) and cellular telecommunication systems. See, Patent Application, page 2, ll. 25-31. Thus, one example of a network operating according to multiple wireless technologies could be a network operating according to personal communications services (PCS) technology and cellular telecommunication technology. In this embodiment, a mobile switching center (MSC) may determine whether a mobile device operates according to PCS or cellular telecommunication technologies and generate a paging request based on the determination. See Patent Application, page 6, ll. 7-22 and Figure 2.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant respectfully requests that the Board review and overturn the four rejections present in this case. The following issues are presented on appeal in this case:

(A) Whether claims 1-3, 6-7, 10-11, 15, 18-20, 23-25, and 28-29 are obvious over Corriveau in view of Streter;

(B) Whether claims 4-5, 13-14, and 21-22 are obvious over Corriveau in view of Streter and further in view of La Medica;

(C) Whether claims 8-9, 16-17, and 26-27 are obvious over Corriveau in view of Streter and further in view of Lamb; and

(D) Whether claim 12 is obvious over Corriveau in view of Streter and further in view of Lamb and De Oliveira.

VII. ARGUMENT

A. Legal Standards

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. That is, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573

(Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

B. Claims 1-3, 6-7, 10-11, 15, 18-20, 23-25, and 28-29 are not obvious over Corriveau in view of Streter.

Corriveau describes a mobile switching center (MSC) for wirelessly paging a mobile device based on the mobile device's expected service type. For example, some mobile devices may only be capable of receiving voice services, and not asynchronous data services and/or facsimile services. Thus, Corriveau describes modifying pages from the mobile switching centers to include service codes that indicate the service type (*e.g.* voice service, asynchronous data service, facsimile service) for the call. However, Corriveau fails to describe or suggest paging a mobile device using a network operating according to multiple wireless technologies. Furthermore, as admitted by the Examiner on page 3 of the Final Office Action, Corriveau does

not describe or suggest determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on the accessed information. The Examiner also admits on page 3 of the Final Office Action that Corriveau fails to describe or suggest generating a paging request for the mobile device that is based at least partially on the technological capability of the mobile device when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network.

The Examiner relies upon Streter to describe a dual-mode wireless telephone communication system 10 that may be used for wireless communication with dual-mode wireless telephones 12. The dual-mode wireless telecommunications system 10 includes a first wireless telephone system that outputs analog telephone signals for transmission according to a first wireless protocol and a digital wireless system 20 that includes a digital base station 22 for transmission according to a digital-only transmission protocol. See Streter, col. 5, ll. 15-39 and Figure 1. The digital wireless telephone system 20 may selectively control the selection of a wireless telephone system (*e.g.*, the analog wireless telephone system or the digital wireless telephone system) by the dual-mode wireless telephones 12. For example, the digital wireless system 20 may output a control command instructing selected dual-mode telephones to register with an alternative wireless communication system, such as an analog system. See Corriveau, col. 6, ll. 13-27 and Figure 1.

The Examiner alleges that Streter describes determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on the accessed information. Appellant respectfully disagrees and notes that the digital wireless telephone system 20 assumes that the dual-mode wireless telephones 12 can

communicate using either the analog wireless telephone protocol or the digital wireless telephone protocol. See Streter, col. 5, ll. 40-61. Thus, the digital wireless telephone system 20 described by Streter does not determine whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on accessed information. Accordingly, Appellant respectfully submits that Corriveau and Streter fail to teach or suggest all the limitations of the claimed invention.

Appellant further submits that the cited references fail to provide any suggestion or motivation to combine and/or modify the prior art to arrive at the claimed invention. Corriveau is completely silent with regard to dual-mode wireless communication systems and so provides no suggestion or motivation to combine the subject matter described in Corriveau with any of the subject matter described in Streter. Streter is completely silent with regard to the service types described in Corriveau and so provides no suggestion or motivation to combine the subject matter described in Streter with any of the subject matter described in Corriveau.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the present invention is obvious over Corriveau in view of Streter. Appellant requests that the Examiner's rejections of claims 1-3, 6-7, 10-11, 15, 18-20, 23-25, and 28-29 under 35 U.S.C. 103(a) be REVERSED.

C. Claims 4-5, 13-14, and 21-22 are not obvious over Corriveau in view of Streter and further in view of LaMedica.

As discussed above, neither Corriveau nor Streter describe or suggest determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on accessed information. Corriveau and Streter also

fail to provide any suggestion or motivation to combine and/or modify the prior art to arrive at the claimed invention.

La Medica describes techniques for wireless telecommunication using dual-mode phones that may operate in an analog mode or a digital mode. The dual-mode phones may be used by a subscriber to a personal communications system service provider. Alternatively, the dual-mode phones may be used by a subscriber to a cellular service provider. See La Medica, col. 7, ll. 25-26. However, La Medica is completely silent with regard to paging a mobile device using a network operating according to multiple wireless technologies. Accordingly, La Medica fails to describe or suggest determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on the accessed information. La Medica also fails to describe or suggest generating a paging request for the mobile device that is based at least partially on the technological capability of the mobile device when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the present invention is obvious over Corriveau in view of Streter and further in view of La Medica. Appellant requests that the Examiner's rejections of claims 4-5, 13-14, and 21-22 under 35 U.S.C. 103(a) be REVERSED.

D. Claims 8-9, 16-17, and 26-27 are not obvious over Corriveau in view of Streter and further in view of Lamb.

As discussed above, neither Corriveau nor Streter describe or suggest determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple

wireless technologies of the network based on accessed information. Corriveau and Streter also fail to provide any suggestion or motivation to combine and/or modify the prior art to arrive at the claimed invention. The Examiner relies upon Lamb to describe storing a user profile of the mobile device in a Home Location Register of a mobile switching center. However, Lamb does not remedy the aforementioned deficiencies of Corriveau and Streter.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the present invention is obvious over Corriveau in view of Streter and further in view of Lamb. Appellant requests that the Examiner's rejections of claims 8-9, 16-17, and 26-27 under 35 U.S.C. 103(a) be REVERSED.

E. Claim 12 is not obvious over Corriveau in view of Streter and further in view of Lamb and De Oliveira.

As discussed above, neither Corriveau nor Streter describe or suggest determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on accessed information. Corriveau and Streter also fail to provide any suggestion or motivation to combine and/or modify the prior art to arrive at the claimed invention. The Examiner relies upon Lamb to describe storing a user profile of the mobile device in a Home Location Register of a mobile switching center. The Examiner also relies upon De Oliveira to describe broadcasting a page in a last cell in which the mobile device being paged was registered with the network. However, neither Lamb and or De Oliveira remedy the aforementioned deficiencies of Corriveau and La Medica.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the present invention is obvious over Corriveau in

view of Streter and further in view of Lamb and De Oliveira. Appellant requests that the Examiner's rejections of claim 12 under 35 U.S.C. 103(a) be REVERSED.

VIII. CLAIMS APPENDIX

The claims that are the subject of the present appeal – claims 1-29 – are set forth in the attached “Claims Appendix.”

IX. EVIDENCE APPENDIX

There is no separate Evidence Appendix for this appeal.

X. RELATED PROCEEDINGS APPENDIX

There is no Related Proceedings Appendix for this appeal.

XI. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-29, over the prior art of record. The undersigned may be contacted at (713) 934-4052 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

Date: 11/15/05



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AGENT FOR APPELLANTS



CLAIMS APPENDIX

1. (Previously Presented) An apparatus for wirelessly paging a mobile device using a network operating according to multiple wireless technologies based at least in part on a technological capability of the mobile device, the apparatus comprising:

processing circuitry configured to access information associated with the technological capability of the mobile device to determine whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network and to generate a paging request for the mobile device that is based at least partially on the technological capability of the mobile device when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network.

2. (Original) The apparatus of claim 1, wherein the paging request is based at least partially on an identifier associated with the mobile device to be paged.

3. (Original) The apparatus of claim 1, wherein the apparatus is in communication with a wireless network that comprises at least one cell, said at least one cell being configured to receive the paging request generated by the processing circuitry and to wirelessly broadcast the paging request via an antenna of the network to enable said at least one cell to wirelessly communicate with the mobile device being paged.

4. (Original) The apparatus of claim 3, wherein said technological capability includes a wireless protocol technology that said at least one cell utilizes to wirelessly broadcast paging requests to mobile devices that have the technological capability to wirelessly

communicate using said wireless protocol technology.

5. (Original) The apparatus of claim 3, wherein said technological capability corresponds to a band class over which said at least one cell is configured to wirelessly broadcast paging requests and over which the mobile device being paged is configured to wirelessly communicate.

6. (Original) The apparatus of claim 3, wherein said technological capability corresponds to one or more specific channels over which the mobile device being paged is capable of communicating and over which said at least one cell is capable of communicating with mobile device.

7. (Original) The apparatus of claim 3, wherein the processing circuitry is comprised at a Mobile Switching Center (MSC) of the wireless network, and wherein the technological capability of the mobile device is stored at the MSC of the wireless network, the MSC being the home MSC of the mobile device.

8. (Original) The apparatus of claim 7, wherein the technological capability of the mobile device is stored in a Home Location Register (HLR) of the home MSC.

9. (Original) The apparatus of claim 7, wherein the technological capability of the mobile device is stored in a Visitor Location Register (VLR) of the home MSC.

10. (Original) The apparatus of claim 7, wherein when the mobile device is to be paged, the MSC generates a paging request that is broadcast only to mobile devices that have the same technological capability of the mobile device being paged.

11. (Original) The apparatus of claim 7, wherein the MSC is a serving MSC of the mobile device, and wherein the serving MSC determines when the mobile device has registered with the network comprising the serving MSC, and wherein the serving MSC obtains information relating to the technological capability of the mobile device from the home MSC of the mobile device, and wherein the serving MSC uses the information obtained by the MSC when generating a page request for the mobile device that is based at least partially on the information obtained from the home MSC relating to the technological capability of the mobile device.

12. (Original) The apparatus of claim 10, wherein the paging request that is broadcast to mobile devices having the same technological capability of the mobile device being paged is first broadcast in a last zone in which the mobile device being paged registered with the network, and wherein the home MSC accesses this registration information and includes the registration information in the page request when the page request is generated.

13. (Original) The wireless network of claim 10, wherein said technological capabilities of the mobile devices include a wireless protocol technology that said at least one cell utilizes to wirelessly page mobile devices that have the technological capability needed to

wirelessly communicate with the cell that is paging the particular mobile device.

14. (Original) The wireless network of claim 10, wherein said multiple wireless technologies of the network correspond to multiple band classes over which said MSC and said at least one cell are configured to wirelessly broadcast paging requests and over at least one of which the particular mobile device being paged is configured to wirelessly communicate.

15. (Original) The wireless network of claim 10, wherein said multiple wireless technologies correspond to multiple specific channels over which the network can issue pages and over at least one of which the particular mobile device being paged is capable of communicating.

16. (Original) The wireless network of claim 10, wherein the technological capabilities of the mobile devices are stored in a Home Location Register (HLR).

17. (Original) The wireless network of claim 10, wherein the technological capabilities of the mobile devices are stored in a Visitor Location Register (VLR).

18. (Previously Presented) A method for wirelessly paging a mobile device using a network operating according to multiple wireless technologies based at least in part on a technological capability of the mobile device, the method comprising the steps of:

accessing information associated with the technological capability of the mobile device from processing circuitry in communication with a wireless network;

determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network based on the accessed information; and
generating a paging request for the mobile device that is based at least partially on the technological capability of the mobile device when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network.

19. (Original) The method of claim 18, wherein the paging request is based at least partially on an identifier associated with the mobile device to be paged.

20. (Original) The method of claim 18, wherein the wireless network comprises at least one cell, said at least one cell being configured to receive the paging request generated by the processing circuitry, the method further comprising the step of wirelessly broadcasting the paging request via an antenna of the network to enable said at least one cell to wirelessly communicate with the mobile device being paged.

21. (Original) The method of claim 18, wherein said technological capability includes a wireless protocol technology that said at least one cell utilizes to wirelessly broadcast paging requests to mobile devices that have the technological capability to wirelessly communicate using said wireless protocol technology.

22. (Original) The method of claim 18, wherein said technological capability corresponds to a band class over which said at least one cell is configured to wirelessly broadcast paging requests and over which the mobile device being paged is configured to wirelessly

communicate.

23. (Original) The method of claim 18, wherein said technological capability corresponds to one or more specific channels over which the mobile device being paged is capable of communicating and over which said at least one cell is capable of communicating with mobile device.

24. (Original) The method of claim 18, wherein the processing circuitry is comprised at a Mobile Switching Center (MSC) of the wireless network, and wherein the technological capability of the mobile device is stored at the MSC of the wireless network.

25. (Original) The method of claim 24, wherein the MSC is the home MSC of the mobile device.

26. (Original) The method of claim 25, wherein the technological capability of the mobile device is stored in a Home Location Register (HLR) of the home MSC.

27. (Original) The method of claim 26, wherein the technological capability of the mobile device is stored in a Visitor Location Register (VLR) of the home MSC.

28. (Original) The apparatus of claim 26, wherein when the mobile device is to be paged, the MSC generates a paging request that is broadcast only to mobile devices that have the same technological capability of the mobile device being paged.

29. (Original) The apparatus of claim 26, wherein the MSC is a serving MSC of the mobile device, and wherein the serving MSC determines when the mobile device has registered with the network comprising the serving MSC, and wherein the serving MSC obtains information relating to the technological capability of the mobile device from the home MSC of the mobile device, and wherein the serving MSC uses the information obtained by the MSC when generating a paging request for the mobile device that is based at least partially on the information obtained from the home MSC relating to the technological capability of the mobile device.